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ABSTRACT

Research reveals the importance of early experiences for the development of young children's brains. This guide suggests ways to make the most of children's brain potential at different ages. The activities described can be used to enhance all children's learning and brain development. Following an introduction, the guide's sections are: (1) "Understanding the Brain"; (2) "Old Thinking vs. New Thinking"; (3) "Three Key Findings in New Brain Research"; (4) "Misunderstandings about the New Brain Research"; (5) "Brain Compatible Learning"; (6) "Birth to 12 Months"; (7) "Ages 12-24 Months"; (8) "Ages 2-3"; (9) "Ages 4-5"; (10) "Starting to School"; (11) "Early Primary"; (12) "Later Primary"; and (13) "Resources." (EV)

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FOOD FOR THOUGHT

SOUTHERN EARLY CHILDHOOD ASSOCIATION

Second Edition

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your child's brain

FOOD FOR THOUGHT

SOUTHERN EARLY CHILDHOOD ASSOCIATION

Second Edition

Your Child's Brain
FOOD FOR THOUGHT

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The names of all children and families in this book have been changed to protect their privacy.

The Southern Early Childhood Association provides a variety of publications, videos, and symposia for teachers and caregivers of young children. For more information about our services, call us at 1-800-305-7322, e-mail us at SECA@aristotle.net, or visit us on the Internet at www.seca50.org.

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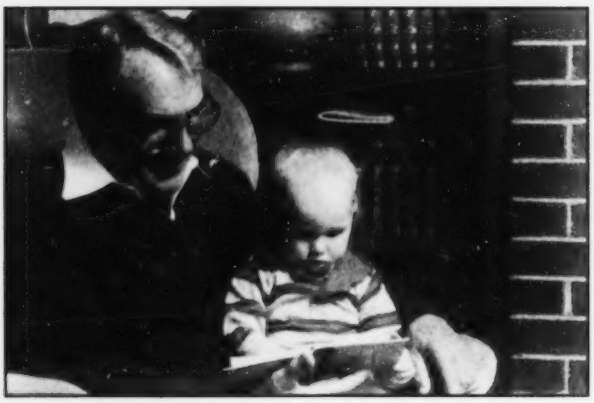
INTRODUCTION

"Babies are born to learn. It is our job to be good partners in the learning process."

***Dr. Patricia Kuhl**, Chair of Speech and Hearing Sciences*
University of Washington

Dad and 18-month-old Cory are sitting on their sofa together, reading a book about farm animals. Cory points to a picture of a cow and says, "Moo-moo."

The father smiles warmly and says, "Yes! The cow says 'Moo'." He gives Cory a hug and turns to another page, then points to a picture of a dog and asks his son, "What sound does a dog make?" During the day, father and son share many more informal learning experiences.



Through common early reading activities just like this, adults promote children's brain development. Positive, everyday interactions, combined with countless other interesting life experiences, have a powerful, lasting impact on children's intellectual, emotional, and social development.

When adults encourage children's early reading skills, they help build and strengthen the connections or "wiring" in children's brains. These new pathways make it possible for children to continue to learn, to get along with people, and to increasingly gain control of their emotions.

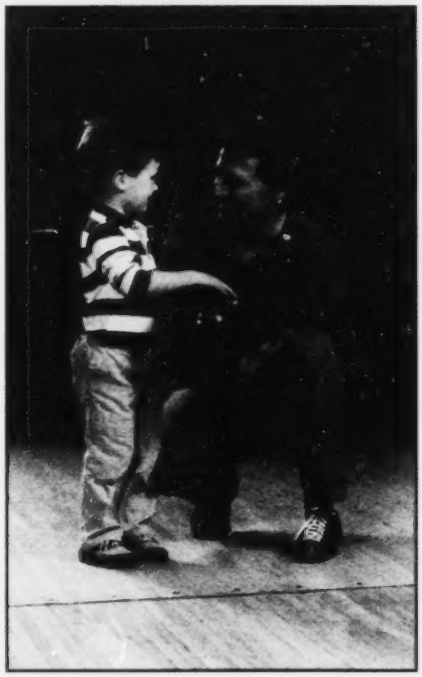
Caregivers and families realize the importance of loving, secure relationships and stimulating experiences that promote children's intellectual, social, and emotional growth. Science is proving, through high-tech brain scans and other advanced technology, that very young children's brains are flexible and designed to grow. "Unlike the animal who behaves according to instinct, the human brain gets shaped," says Ron Lally, a respected child development researcher.

Families and early childhood educators are using this fascinating new scientific research to decide how to raise and educate our children. Developmentally appropriate practices, which have been advocated by educators for many years, are now proven to be effective. Absorbing activities, talking with children, lots of print to look at, and similar strategies do indeed enhance children's learning capacity. These early experiences promote the physical development, or formation of synapses, in the brain. We, as families and educators, can improve children's learning potential with positive interactions and enriching, playful activities.

Your Child's Brain suggests a few practical ways to make the most of children's brain potential at different ages. These and similar activities can enhance all children's learning and brain development.

"Preparing for being a parent is no less important than preparing for your life's work."

Dr. Ezra Davidson, Jr.
Professor of the Department of Obstetrics and Gynecology at the Charles R. Drew University of Medicine and Science, Los Angeles, CA.



UNDERSTANDING THE BRAIN

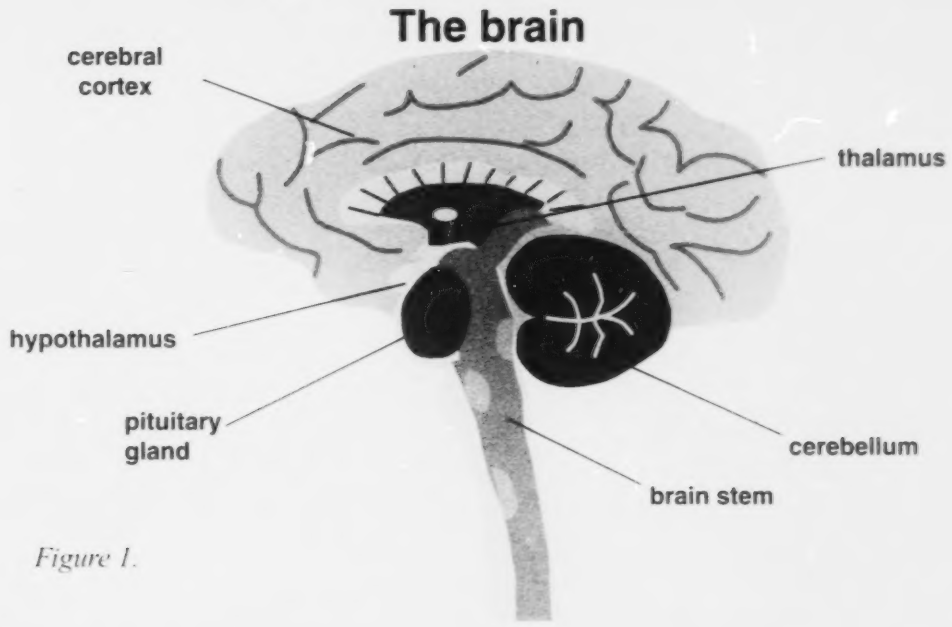


Figure 1.

The ***brain*** is part of the central nervous system. It controls everything that happens in the rest of the body. The brain controls actions that are voluntary, such as walking or talking, as well as those actions that are involuntary such as breathing or the circulation of blood throughout body by the heart. It has two parts, or ***hemispheres***. Each hemisphere is subdivided into four areas called ***lobes***. The lobes have distinct areas called ***folds***. The body produces certain chemicals such as *serotonin*, *dopamine* and *endorphin*, which help the brain to grow and develop. These chemicals allow the brain cells to connect to each other efficiently and are released in waves at various times as a child grows and develops. By knowing when these chemicals are released, we can predict how and when the areas of brain will grow and develop. These "ideal times" or "prime-times" for development are often called developmental stages. Remember, each part of the brain controls specific things, but the entire brain is interconnected in a series of complex pathways. *Figure 1* shows some of the key areas of the brain:

Brain Basics

Each organ in the body is composed of tiny individual cells. The cells that make up the nervous system are called ***neurons***. If you think of neurons as wires, it is easy to see that many different neurons are needed to help the brain carry out its intended tasks and functions. To insure that the brain has all of the neurons needed, it produces many, many, neurons before birth. However, long before the baby is born the brain begins an elaborate process in which many neurons are eliminated. Even after shedding neurons before birth, an infant is born with about 100 billion brain cells.

In order to communicate and connect with other neurons, each neuron needs a way to send out impulses (information) to other neurons. This output device is a fiber called an ***axon***. Each neuron has only one axon. However, in order to receive information, many input (information receiving) fibers called ***dendrites*** are required.

Connections

At birth an infant has 100 billion neurons (nerve cells). As the brain develops, it is necessary for neurons to connect to each other. These connections are called ***synapses***. Axons (output fibers) connect with dendrites (input fibers). The synapses join together to form vast networks. These connections, sometimes up to 15,000, form complex pathways. This ultimately results in an immense, interconnected "wiring system" or "brain circuitry."

As a child grows and develops, his brain creates many more synapses than he will ever use or need. As these synapses are used in everyday experiences through play, in interactions with caring adults, and by exploring environments that are safe and healthy, they become reinforced. The more often synapses are reinforced, the more permanent they become. If they are not reinforced often enough, then they are eliminated in a "pruning" process used by the brain to maintain efficiency. That is why experience is a key to "wir-

ing" the brain. Therefore the old saying is true, *"experience is the best teacher."*

Elasticity

There is more and more evidence which supports the belief that the brains of young children have the ability to adapt and change when a problem arises. This concept is called ***neuroplasticity***. In essence, the brain can adapt and compensate with intervention. For example, a young child who experiences a stroke may recover the ability to use language, because the brain forms new synapses and in a sense "re-wires" itself.

Tools for discovery—

If the brain is so important why hasn't it been studied before now?

The answer it simple. Although brain research has been conducted for years, we now have the tools to study much more in-depth what is going on inside the brain. Imagine our ancestors when they discovered that fire could be used for more than just heat. Until they were able to really learn what fire could do to help them (make some tools stronger, preserve food longer, heat the inside of dwellings, and ultimately run engines), they didn't fully understand the impact and uses of fire. The same analogy applies to brain research.

In the past, brain research depended on three things: animal studies, case studies, and autopsy reports.

- ***Animal studies*** compared the behavior of animals under certain conditions and then falsely assumed that humans would always react similarly under those conditions.

- ***Case studies*** looked at the outward behavior of individuals and then made assumptions on how that outward behavior was internally controlled by brain function.

- ***Autopsies*** assumed that the size and shape of the brain in some way reflected the functional ability of the organ.

Today's tools allow for much more accurate and dramatic information.

- ***Magnetic Resonance Imaging (MRI)*** is a technology that uses magnetic energy to generate computerized pictures of organs or tissues within the body.

- ***Positron Emission Tomography (PET)*** scans use MRI based technology to show computer images of the brain and the activity levels of specific areas inside the brain.

Based on what we have discussed so far, it is easy to see the difference between Old Thinking and New Thinking

OLD vs NEW

• Brain development depends solely on genes. • The experiences that a baby has before age three have minimal impact on brain development. • A secure relationship with a primary caregiver creates a favorable context for early learning. • Brain development is linear; the brain's capacity to learn and change grows steadily as an infant processes toward adulthood. • A toddler's brain is much less active than the brain of a college student.	• How the brain develops depends on a complex interaction of both genes (which a baby is born with) and experiences. • Early experiences have a decisive impact on the architecture of the brain and on the nature and extent of brain capacities. • Early interactions don't just create a context; they directly affect the way the brain is wired. • Brain development is non-linear; there are prime times for acquiring different kinds of knowledge and skills. • By the time children reach age three their brains are twice as active as those of adults; activity levels drop during adolescence.

Three Key Findings in the New Brain Research

An individual's capacity to learn and thrive in a variety of settings depends on both nature and nurture

Across all ethnic and racial groups the human brain is uniquely constructed to benefit from both good teaching and experiences—especially during the early years of life

While the risks and perils are the greatest during the first years of life, learning is a lifelong process

Misunderstandings About the New Brain Research:

Misunderstanding: You are a bad parent if you have to work outside of the home.

Fact: Working outside the home does not deprive a child as long as the child is placed in a warm, loving, stimulating environment. Children need primary caregivers who can nurture trusting, responsive relationships. Thoughtful consideration and investigation of caregiving possibilities should help determine the best environment for children who are cared for outside of the home.

Misunderstanding: To "grow" a healthy brain you must spend lots of money on colorful, fancy brain development toys and materials.

Fact: Growing a healthy brain does not require spending lots of money on colorful, fancy brain development toys and materials. What's most important is that toys and materials provide real word and multisensory experiences for children. Banging together pots and pans from the kitchen cabinet is just as beneficial, if not more, than expensive commercial materials.

Misunderstanding: Since babies are born "pre-wired," formal education (reading, math) should start immediately after birth.

Fact: Formal academic training is not necessary, nor appropriate, until the child reaches school age. Being "pre-wired" means that the neural circuitry has been laid down, however, the neocortex that part of the brain that handles cognitive functions, is not fully developed yet. Children need many and varied early experiences with real and concrete toys and materials that build skills such as sorting, sequencing, and patterning. Teaching practices that focus on isolated and abstract symbolic concepts such as letters, sounds, and numbers and on using worksheets, flash cards, and drill sessions before those areas of the brain that handle such tasks and function are fully developed put children under unnecessary stress. Such stress can impair optimal brain learning and thus jeopardize later academic success.

Misunderstanding: By doing certain "programs" or learning prescribed activities, you can "hurry-up" your child's brain development and make him "smarter."

Fact: Prescribed special programs or learning activities do not accelerate brain development or make children smarter. Each child and each child's brain is unique. Children will learn and develop at their own rate. Normal brains can be as much as three years apart in development stages. Therefore, individualizing learning experiences based on children's unique profiles of multiple intelligences and learning styles will give children the opportunity to maximize their potentials. Providing an enriched environment stimulates brain activity and subsequent development of higher functioning intellects.

Misunderstanding: If your child is born with a disability, there is nothing you can do to help them.

Fact: Children born with disabilities can be helped. As a matter of fact, new brain development research offers hope that we will gain valuable information to prevent some learning disabilities and to work better with those disabilities that do occur.

How to Promote Healthy Development:

Using common sense rules about health and safety foster healthy brain development.

- Get regular routine "well-care" checkups and immunizations.
- Feed children nutritious, well balanced meals.
- Ensure safety by covering electrical plugs, putting chemicals out of reach, "baby proofing" cabinets, using car seats, and later, helmets for bike riding.

Spending quality time with children helps them learn to feel confident, secure, and experience positive relationships later in life.

- Talk to children even if they're too young to talk back to you.
- Respond to all infant moods, even the "bad moods."
- Touch children and play with them on their own terms following their rules.
- Read to children often and regularly.
- Learn to follow the cues they give you, even the non-verbal ones, such as leaning forward and raising up their hands to be picked up.

Encouraging a child's active, safe exploration of the world around him encourages natural curiosity.

- Place children in environments with same-age or near-age peers.
- Allow children to make choices, and honor their choices.
- Remember, play environments and toys don't have to be expensive, as long as they are appropriate to the age and stage of the child's development.

Modeling positive, emotionally healthy behavior teaches children how to develop relationships.

- Show children appropriate ways to express and describe their feelings.
- Use routines that help children learn to depend upon and trust you.
- When a child's behavior doesn't meet your expectations, help him see that you love him and it's just his behavior that you "don't like."

Staying involved with your child helps you monitor and know how he is developing in all areas.

- Get to know your child's teacher, and find out what's going on when your child is not with you.
- "Unplug the drugs." Not all addictions result from internal substances. Limit television, video and computer time. You might be shocked by some of the messages young children receive from these activities.

Remember, parenting is the ultimate form of "trial and error."

- Three phrases mean a lot to all children: "I love you," "I'm sorry," and "Let's do it together!"

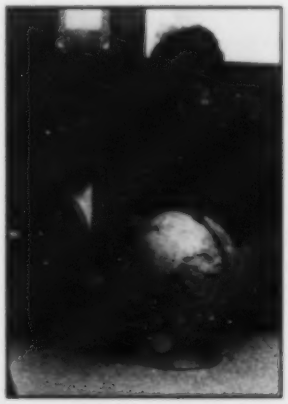
BRAIN COMPATIBLE LEARNING

"Food for Thought"

Brain compatible learning **is a term which is used to describe an overall situation which optimizes the opportunities for healthy growth and development of the brain.**

Examples of brain compatible learning include:

- An enriched environment based on safe, age appropriate activities



- Providing emotionally and physically healthy places to learn

- Giving and honoring individual choices

- Allowing enough time in the context of learning for brain synapses to grow and strengthen

- Creating activities for learning that are meaningful to the child

Birth - 12 Months

"An infant is born with about 100 billion brain cells. During the first year of life, several key things occur."

Keys

- Babies come into the world "wired" to learn. Their brains are prepared to begin receiving information immediately.
- Within the brain, connections are randomly made between the wires but become less random as they are reinforced by daily experiences.
- Experiences during the first years of life help the child make the "correct and logical" connections needed to function.
- The cerebral cortex, which is responsible for language and spatial orientation, is dormant at birth but by age one it is very, very active.
- Between two and three months of age, a "prime time" for visual and auditory stimulation occurs.
- By eight months of age, the frontal cortex, which regulates stress, behavior, and emotion, becomes clearly active and functional.

Birth - 12 Months

Babies need to develop:

- **A sense of trust.**

According to Erikson (1963), a sense of trust is the key to having a positive outlook and to healthy personality development.

Activities that encourage a baby to trust include:

-Regular routines with consistent care-giving by adults, who meet his needs.
-Environments that are physically and emotionally safe and secure.
-Meeting a child's physical needs (hunger, sleep, comfort) so that he learns to trust his world and the people in it.
-Holding, cuddling, and making eye contact because these things say to a child "trust me—I love you."

- **An attachment to significant people in their lives.**

Babies need strong emotional ties to specific, significant people. Attachment is formed as a child consistently experiences a feeling of safety and permanence.

To develop secure attachment a baby needs:

-Adults who respond emotionally and understand that he has "temperament states," such as active times, sleep times, and feeding times.
-Repetitive consistent interactions with familiar adults.
-Positive responses to his attempts to socialize, which may consist of nothing more than eye contact.
-To be held and talked to during bathing or feeding times.

- **An increasing understanding, through sensory exploration of the world around him. At no other time in his life is so much activity going on inside his brain.**

Activities conducive to sensory exploration include:

-Toys that are varied in size, shape, color and texture.
-Foods that are varied in size, color, and texture.
-Small safe areas for crawling or pulling up.
-Activities that provide limited exploration of the outdoors.
-Reciprocal games like "patty-cake" or "peek-a-boo."

Birth - 12 Months

Selected areas of development for discussion:

- **Motor Skills**

A baby younger than 3 months can move his arms and legs equally well, raise his head when placed on his stomach, and follow bright objects with his eyes, but he cannot yet control his hands. Between 3-6 months, your baby gains more muscle control, he rolls over, can hold his head steady when sitting up, and begins to see more clearly. Between 6-9 months, your baby can sit alone without support, is able to move from lying to sitting, and can pull himself up to stand. He may crawl, reach out to grasp objects, and begins to feed himself. During the last three months of that first year, he is able to sit alone well, is able to creep and crawl, and is able to hold a cup and spoon.

To help your child develop:

-Place him in different positions when he is awake.
-Hold him in a sitting position, making sure his back and head are supported until he can hold his head up on his own. Infant seats are acceptable as long as an adult is nearby.
-Provide a safe environment so that he can creep, crawl, and explore. As he becomes mobile, he moves into lots of new areas!
-Offer him lots of toys of different shapes, textures, and colors. (Be sure toys are safe—no small pieces or sharp edges.)
-Encourage him to begin feeding himself. Try to use a cup with a small amount of liquid. (Sure it's messy! But it's important for his development.)
-Let him pull himself up to stand. A railing or low furniture can encourage walking. Watch sharp edges!
-Play outside with him in a safe play area and let him experience nature.

- **Communication**

Babies quickly move from non-verbal (unintentional crying and gestures) to verbal intentional communication such as cooing, babbling, pointing, and, finally, words.

To help develop communication:

-Respond to every gesture and action. For example, if a baby cries, pick him up, cuddle him, and talk to him. Remember, babies hear long before they begin to talk.
-Describe things around you and talk to your baby all the time.
-Read and sing to your child regularly.
-Make eye contact; this is the first form of communication a child uses.

- **Cognitive development**

Two of the earliest cognitive (thinking) skills babies learn are : 1) cause and effect (an action from me causes something to happen) and 2) reciprocity (give and take). Activities to develop cause and effect include games where the child's actions have a defined result. For reciprocity, plan repetitive back and forth activities.

12 Months - 24 Months

"The brain keeps those connections that are used most often before the age of three and discards the rest. With simulation from the environment, these connections---be they positive or negative---become permanent."

Keys

- Early experiences contribute significantly to the structure of the brain and its capacities. The quality, quantity, and consistency of stimulation will determine later development.

- Children learn in the context of important relationships, and the quality of these early interactions will directly affect the way the brain is "wired."

- The brain develops in an integrated fashion over time. An environment full of rich emotional, sensory, and language experiences addresses multiple aspects of development simultaneously.

- With the exception of sight, most of the critical periods of human brain development are open and the brain is most responsive to its environment during this time period---12 to 24 months. Many of the neurological foundations that govern lifelong skills and potential are determined during toddlerhood.

12 Months - 24 Months

Toddlers need to develop:

- **A sense of self.**

Developing a positive sense of self is a key task of toddlerhood. During this period toddlers have a strong desire to be independent and to assert themselves, yet at the same time are very dependent and need positive guidance and support. Respond to their often challenging behaviors with respect, appreciation, and a sense of humor. Providing an optimum social/emotional environment helps toddlers develop a positive sense of self.

- **Positive Relationships with the significant people in their lives.**

The daily interactions children have with their parents and primary caregiver help shape who they are, how they feel about themselves, and how they relate to other people.

Strategies to help build relationships with toddlers:

-Continue to build a sense of trust by letting child know she can depend on you. Respond promptly to child's needs.
-Give your full attention when responding to the child. Listen to the child's verbal and nonverbal ways of communicating with you and respond fully and appropriately. Try to avoid being distracted when communicating individually with children.
-Plan schedules so that caregivers can devote ample time to each child. Find time during the day to really get to know children on an individual basis.
-Give the child opportunities to make decisions. For example, "What color of playdough would you like today?" "Would you like an apple or a banana slice for your snack?" Offer choices that you both can live with.

- **Fine and gross motor skills.**

During this age period, toddlers possess a wide range of fine and gross motor skills. They can scribble with crayons, turn pages in a book, tear collage materials, squeeze and roll playdough, and fingerpaint. Their gross motor skills range from walking to running to hopping and climbing. They throw, roll, and catch balls. To promote motor development, encourage toddlers to try new skills and guide them in their efforts.

12 Months - 24 Months

Selected areas of development for discussion:

- **Social/Emotional Development**

The first two years of life are the optimum period for building the neural connections for healthy social/emotional development.

To help your child develop:

-Enhance autonomy by allowing toddlers to complete self-directed tasks and assist them with those that are beyond their capacity. For example, let child put on and take off shoes and socks. Assist child in buttoning and zipping clothes.
-Questions such as, "Would you like to play with your toys or would you like me to read a story to you?" Offer real choices and give toddlers the opportunity to feel in control.
-Acknowledge child's accomplishments with genuine admiration and specific comments, "You put your toys away all by yourself, Kenny. Thank you for helping." Using children's names frequently helps to develop their concepts of self.
-Provide toddlers many opportunities to engage in exploration and play. Autonomy is enhanced when children are provided a variety of activities they can do on their own. Provide toys, materials, utensils, and equipment that toddlers can use with little or no assistance.

- **Language Development**

Optimal development of toddlers' language is dependent on the neural connections formed through supportive environments and positive interactions with others. The size of a toddler's vocabulary is strongly related to how much the child is talked to and interacted with by primary caregivers.

-Respond patiently and respectfully to the toddler's attempts to communicate, both verbally and nonverbally.
-Speak frequently, clearly, and distinctly to toddler, modeling the proper mechanics of speech.
-Expand on toddler's language by adding vocabulary and ideas, for example, "Me cookie," says Shawna. "Do you want a cookie?" says Mom.
-Read picture books to toddlers. The word and pictures association helps toddlers increase their vocabulary.
-Sing songs, play games, recite and act out nursery rhymes and fingerplays.

Ages 2-3

"By age three the brains of children are two and a half times more active than the brains of adults, and they remain at this active level through approximately age 10."

Keys

- By age three, the child's brain has developed 1,000 trillion synapses—about twice as many as his parents have in adulthood.
- Children learn through play, and play supports growth and development through all levels.
- During these years, children develop motor independence and control over the muscles needed for "toilet training."
- Specific behaviors which indicate the child's increased desire for independence are displayed.

20

Ages 2-3

Children at this age need to develop:

- **A sense of autonomy and independence.**

This means that two and three year olds have an insatiable desire to move and explore their world. Activities that encourage autonomy and independence include those games and toys that are both flexible and challenging, while offering increased opportunities to make choices. Remember, too many choices are overwhelming. Start out by offering a choice between two toys or activities.

- **A way to learn self-help skills such as feeding, toileting, dressing.**

Part of his growing need to be independent is the child's desire to do things for himself. In order to encourage this, activities should include playing with child-sized utensils, being allowed participation in taking care of himself, even if it's just partial participation, and having patient, supportive adults who recognize that toilet training is a process of trial and error.

- **An opportunity to experiment with and practice more sophisticated uses of language.**

By now the child is making two and three word sentences and is beginning to understanding symbolic communication, such as "a cup" and "a picture of a cup" indicate the same thing. Avoid correcting the child who might say "ootie" for cookie. Simply repeat what the child says using the correct pronunciation. For example:
Billy: "Me ant ookie."
Parent: "Oh, you want a cookie."

<u>Selected area for discussion</u>:

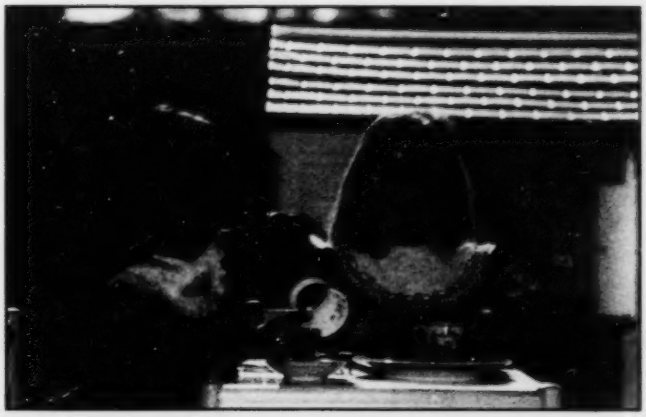
- **Socialization**

Being convinced the entire universe was made to revolve around them and needing to express themselves (especially their displeasure), toddlers are especially given to resistance to adults while simultaneously wanting them nearby.

- **How to handle resistance and tantrums:**

-Be firm and confident.
-Don't yell or become physical.
-Praise good behavior consistently.
-Remember, many outbursts may be avoided by making sure the child is not too sleepy or too hungry.
-Keep expectations appropriate. For example, a two or three year old cannot "sit still" longer than four or five minutes at a time.
-After the tantrum or outburst is over pick the child up.
-Verbalize the child's feelings for him. For example, "you were really upset when Carla took your toy," or "You were really mad when it was time to come inside."

Ages 4-5



"Involvement in play takes time and energy. Children need enough time for play to evolve and develop."

Keys

- Individual identity (cultural, gender, ethnic) is formed during these years.
- A child needs to develop a sense of initiating activities, enjoying accomplishments, and having confidence in his own abilities.
- Friendships are established, and the patterns for developing long-term relationships are formed.
- Play is used more actively for cognitive learning and problem solving.
- A child's self-esteem has a direct impact on his future performance at school.

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Ages 4-5

Children at this age need to develop:

- **Individual identity (cultural, gender, ethnic) is crucial at this age.**

Teachers and parents can encourage identity by answering questions about the body honestly and openly, helping children understand their own cultural customs as well as those of others, and promoting an understanding of equality.

To accomplish this, parents and teachers should:

-Respect the fact that children have a natural curiosity about their bodies.
For example, if Shemilla asks, "Why does Edwardo stand up to potty?" The reply might be, "Boys' and girls' bodies are made differently; boys stand up to potty and girls sit down."
-Use pictures and books that show people from various cultures and races working and playing together.
-Include your child in your customs and traditions and explain them to him in detail.
-Read books about many different things. Most of all, model for your child the value of all human life, and that being different is not bad. Make sure your child understands that one race is not superior to another.

- **A child needs to develop a sense of being able to initiate activities, enjoy accomplishments, and have confidence in his abilities.**

To help a child accomplish this goal, activities should be geared for success, and a child should be given consistent reinforcement during activities and games. Set up games which encourage working together as a team and discourage competition based on individual skill.

- **Friendships**

Friendships and the patterns for long-term relationships are established during this time in a child's life. Some children are shy at this age and don't know how to initiate play. Also, modeling appropriate responses will teach a child positive social interactions. Let your child hear you say "please" and "thank-you" often, and always explain to him why you are saying "thank you."

<u>Area for discussion</u>:

Language development: At this time in their lives children are using language for everything. The best environment for appropriate development of preschool language is one that is rich with printed materials as well as activities which encourage a child to expand his use of language. For example, look at the following scenarios, with the second asking open ended questions:

Parent: "What happened at school today?"
Child: "Nothing."
Parent: "Did you go outside?"
Child: "Yes."
Parent: "What did you do?"
Child "Play"

Parent: "What did you enjoy most today at school?"
Child: "Playing outside with Ernesto."
Parent: "Who's Ernesto and what does he like to do?"
Child: "He's my friend and he likes to play builder like me."
Parent: "What did you build, a house?"
Child: "Nope. we built a big fort to keep out the tigers."

- **Activities which encourage development of language include:**

-Adults who listen and respond to the communication attempts made by the child.
-Conversational activities in which adults ask questions which encourage expansion of language.
-Activities which use printed materials (books, games).
-Language games such as "I spy" Or "I see a _____."

Starting to School

"Children entering kindergarten are now expected to have already acquired the skills that used to comprise the entire year's curriculum!" Willer and Bredekamp (1990).

Keys

- Readiness is based on many factors, and all children do not mature at the same rate.
- Games and rules help children learn the skills needed to cooperate with others.
- Primary age children become increasingly able to decide what is "right" and what is "not right" with certain behaviors and activities.

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Starting to School

Children at this age :

- **Need to develop an understanding of games and the rules which are associated with them.**

Rules help children define the boundaries of their play and the social skills needed for being an active participant in a group. The ability to participate appropriately in rule-based games is directly related to cognitive development as well as development of the skills needed to negotiate with others.

- **Activities which encourage an understanding of games include:**

-Games where the rules are clearly understood.
-Games and activities where fair play and respect for rules are honored.
-Games and activities which encourage "team spirit" and discourage "individual competition."
-Activities which are enjoyed just for "fun."
-Adults who clearly model that winning and losing aren't as important as fair play and respecting the rights of others.

- **Children move into a stage of development called concrete operational thought.**

This means that they acquire the mental ability to think about and solve problems without physical contact with actual objects. They do, however, still have considerable difficulty with abstract concepts and need opportunities to practice what they are learning.

- **As your child moves into this stage:**

-Remember to be patient, because when a child develops skills, ability varies from child to child.
-Ask him about what is going on and demonstrate that you understand when he is confused.
-Create an atmosphere where he comes to you for help and understanding.
-Keep expectations in line with your child's development and skills.
-Constantly reinforce what he is doing by letting him know you are proud of him and his accomplishments.
-Remember, everyone has strengths and weaknesses.

Selected area for discussion:

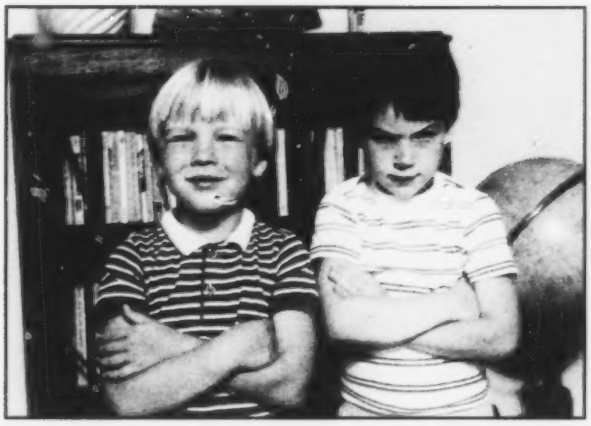
- **Motor Skills**

Your child has started school! Where did the time go? As a kindergarten student, he can dress himself, but needs help tying his shoes. Between 5-6 years, he can throw a ball well, dance and march to music, and may have graduated to a bicycle. Sports may be introduced at this time, and activities such as soccer, T-ball, and swimming may play a large part in his life.

To help your child develop:

-Provide him with ample space for large muscle activities such as throwing and catching a ball.
-Offer him different materials for using small muscles such as cutting, pasting, drawing, and sewing.
-Encourage experiences such as rhythm activities and playing musical instruments; these activities help develop muscle skills and coordination.
-Continue to teach him to experience nature and let him describe to you all the wonderful things he feels, sees, touches, and smells.
-Encourage his interest in organized activities and be an involved parent!

Early Primary



"This is a time when behavior is often directly related to the messages children receive from their 'heroes' and role models."

Keys

- This is a critical period where children have a thirst for knowledge and learning.
- Physical competence and skills play a crucial role in self concept.
- Oral and written communication emerge further.
- Discovery learning is critical to development and higher level problem solving. Since life-long learning patterns are set during this time, helping a child feel good about his accomplishments is very important.

Early Primary

To help your child at this stage:

- **Encourage him to be curious about the world around him and answer his questions.**

- **Read to your child and have your child read to you.**

- **Plan activities in which you and your child build something together or solve a problem as a team.**

- **Ask your child often how he feels and encourage him to talk about his feelings.**

- **Encourage your child to participate in organizations and group activities which foster friendships with others.**

Research clearly indicates that children who don't learn to establish friendships in the early primary grades are at higher risk for low achievement in school, juvenile delinquency, and poor mental health as adults.

Later Primary

"Between ages ten and twelve, peers become increasingly more important to your child."

Keys

- During this time, children set goals that last a lifetime.
- End of the period when the brain's elasticity has been its greatest.
- Motor skills become even more "fine tuned."
- Peers begin to have more influence over the child.

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Later Primary

To help your child:

- Remember, this is a time when your child becomes increasingly aware of his body and a time when subtle changes may occur.

- Peers start to have a big influence on your child and will continue to do so throughout his school years.

- Know where your child is and who he is with. Just because your child is getting older doesn't mean he no longer needs adult supervision and guidance.

- Give your child increasing responsibilities at home and praise him when he meets your expectations and goals.

- If your child is not meeting your goals for expectations, work out a contract with him and set goals together.

- It's never too early to begin educating your child about the dangers of drugs, alcohol, or violence.

Resources

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Jensen, E. (1996). *Brain Based Learning.* Del Mar, CA: Turning Point Publishing

Schiller, P. (1999). *Start Smart: How to Build Brain Power in the Early Years.* Bettsville, MD: Gryphon House

About SECA

Persons who want to learn more about appropriate testing, instructions, and curriculum for young children may want to join the Southern Early Childhood Association (formerly know as the Southern Association on Children Under Six). SECA publishes a quarterly journal, *Dimensions of Early Childhood*, that contains timely articles about early childhood education. SECA also produces a variety of other educational materials and sponsors many training opportunities for teachers and caregivers. For more information, write:

Southern Early Childhood Association
P.O. Box 55930
Little Rock, AR 72215-5930

"The 1990s have been declared the decade of the brain and the decade of education. The human brain receives all education and is the source of all behavior. It is the most complex mass of protoplasm on Earth and perhaps in our galaxy. Some revolutions are obvious because they are fought with weapons. Others, especially those that require new ways of thinking, tend to sneak up on us."

—Marina Cleeves Diamond

"We, as parents and educators, are embarking on a journey. Like those who pioneered before us, we will learn as we go along, depend on each other for help, and join together to help all children develop to their full potential. As the pioneers of the twenty-first century, we have an awesome responsibility to educate, to nurture, and to discover this 'final frontier'—the human brain."

—Dr. Clarissa Willis

your child's brain

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